REMARKS

Previous Rejection of claims 52, 66, 67 under 35 USC section 112 1st Paragraph

In the previous Office Action, claim 52 was cancelled. Claims 66 and 72 were amended to state that the video data that may be searched is the video data previously stored on the first storage medium. Neither claim 66 nor 72 is accounted for in the current Office Action; however, in this response we have assumed that the Examiner considers them to be rejected under 35 USC 103(a) as being unpatentable over Boerger (US 4,650,929) in view of Lobodzinski (5,619,995), and are covered by the comments in that section herein below.

Rejection of claims 8-15, 25-32, 34-36, 41-42, 44-46, 49-51, 55-57, 60-61, and 75-76 under 35 USC 102(b) as being anticipated by Boerger (US 4,650,929)

In the Examiner's Office Action of 2 April 2010, he has identified passages in Boerger *et al.* which purport to demonstrate a digital monitoring and recording system or method that includes displaying digitized images in separate windows using a first set of temporal and spatial parameters and converting the video source images into a data storage format using a second set of temporal and spatial parameters associated with each image; and storing the converted images, including these references:

- "FIGS. 8, 9 and 10 show a selection of some examples of split-screen combinations of large pictures 46(u), 46(v) and 46(w) and small pictures 47(x), 47(y), and 47(z)." (col. 8, ln. 62-64).
- "At every location, also the participant's own image can be displayed as a complete or full screen picture or a mixture or split screen picture arrangement on the individual monitors" (col. 4, ln. 6-9).
- "This equipment is assigned to the participating locations 25 always for the duration of a video conference and it substantially comprises large picture storages 5 and small picture storages 6" (col. 7, ln. 12-15).

- "The problem of how to make the video signals coming from the individual sources available in the central station, as both a complete or full screen picture, or a split screen picture composed of a large picture and at least one coarsened picture, i.e., reduced or small picture, can be solved, as to the hardware, with picture storage units, for example, having a storage capacity exceeding that of a large picture, i.e. a full screen picture. That is, the large pictures and small pictures are stored already in the way or size in which they are later to be available" (col. 3, ln. 52-62)

- "Parallel to large picture storage 5 a coarsened or small picture, i.e. one whose number of picture elements is two-dimensionally reduced (width and height), is produced for example by low-pass filtering through low-pass filter (2-d-low-pass) 11, followed by subsampling effected by a corresponding setting of write control 13, and supplied to a small picture storage 6." (col. 7, ln. 37-43)

- "A central station is connected to all of the participant terminals and includes means for receiving source signals from and transmitting sink or received signals to all the participant terminals as well as storage units for storing in each case a large size picture and at least one small coarse grained picture for each active participant location or terminal, the central station having a programmed processor for receiving control signals from the participant terminals to control the display assembly and split screen of large and small or coarse pictures at the participant terminals individually." (col. 2, ln. 39-50)

The above presented passages describe changing the spatial parameters there is no teaching or description of any changes in the temporal parameters.

In the authoritative reference, "The Art of Digital Video" by respected author John Watkinson, he states:

> "There is a direct connection between the concept of temporal sampling, where the input changes with respect to time at some frequency and is sampled at some other frequency, and spatial sampling, where an image changes a given number of times per unit distance and is sampled at some other number of times per unit distance."

Thus, the image resizing technique disclosed in the fifth passage above (in which sub-sampling is suggested as one way to produce the desired "small" or "coarse" images) only qualifies as a change to the spatial parameters of the image, not to the temporal parameters (such as the image frame rate). Therefore, Boerger has no disclosure of any specification for, or varying of, the temporal parameters of the images to be stored. This is feature is claimed in

independent claims 8, 12, 15, 17, 25, and 29 and was included in the claims of the parent application of the present application. Withdrawal of the above rejection is respectfully requested. Similarly, dependant claims 9-11, 13-14, 26-28, 30-32, 34-36, 41-42,44-46, 49-51, 55-57, 60-61, and 75-76 also are not anticipated.

Rejection of Claims 1-7, 17-18, 33, 38, 43, 47, 52-54, 62-65, 67-71, and 73-74 under 35 USC 103(a) as being unpatentable over Boerger (US 4,650,929) in view of Lobodzinski (5,619,995)

In the Examiner's Office Action of 2 April 2010, he has identified passages in Boerger *et al.* which purport to demonstrate a digital monitoring and recording system or method that includes "a high-capacity storage medium, and programmed to perform the following functions (Figs. 1-2, el. 5-6; and col. 3, ln. 43-47, col. 7, ln. 12-15, 37-43)". The original Boerger application was foreign filed in Germany, and necessarily was translated into English for the U.S. filing. Applicants respectfully suggest that the Examiner has been misled by a poorly executed translation, as evidenced by the multiple misspelled words scattered throughout the disclosure.

In German, the same word, "speicher", is used to denote both the terms "memory" and "storage". Unless the context is clearly defined and understood by the translator, it is difficult to choose the correct meaning.

In the first passage cited (col. 3, ln. 43-47), Boerger recites:

> "According to the invention central stations can be equipped with any number of picture storage units and multiplexers but at least with a number needed for a single videoconference."

In the second passage (col. 7, ln. 12-15, 37-43), Boerger recites:

> "This equipment is assigned to the participating locations 25 always for the duration of a video conference and it substantially comprises large picture storages 5 and small picture storages 6 as well as multiplexers (MUX) 7 for the outgoing video sink or reception signals"

and

> "Parallel to large picture storage 5 a coarsened or small picture, i.e. one whose number of picture elements is two-dimensionally reduced (width and height), is produced for example by low-pass filtering through low-pass filter (2-d-low-pass) 11, followed by subsampling effected by a corresponding setting of write control 13, and supplied to a small picture storage 6",

respectively.

The interpretation of these elements becomes clear by way of a careful examination of Figure 2, and Boerger's complete explanation:

> "The structure and function of a videoconference central station 1 as far as video signals are concerned, may be learned from FIG. 2 where the control equipment in the central station 1 which is necessary for one participating location 25, is shown. The video source signals 41 coming from a camera 26 are supplied to an analog-to-digital converter 9 wherefrom they pass, through an intermediate or first-in-first-out buffer storage (FiFo) 10, if provided, to a large picture storage 5. Through a detecting and selecting synchronization separator 12, for example, the synchronizing information is retrieved from the incoming video signal 41, for a write control 13. Parallel to large picture storage 5 a coarsened or small picture, i.e. one whose number of picture elements is two-dimensionally reduced (width and height), is produced for example by low-pass filtering through low-pass filter (2-d-low-pass) 11, followed by subsampling effected by a corresponding setting of write control 13, and supplied to a small picture storage 6." (col. 7, ln. 25-43)

As disclosed, then, both the "first-in-first-out buffer storage (FiFo)" and also the large picture storages (5) and small picture storages (6) are nothing more than conventional display memory, as they have no persistent storage and constantly are overwritten as the new frames of video arrive at the Central Station. In this sense, the system easily can be understood as an implementation of the same technology and concepts as utilized by Citrix Systems for their "Netware Access Server" product (originally from Novell), and later incorporated into the Microsoft "Terminal Server" product; the software application runs at the central location (Server), and the remote locations (Subscriber Terminal stations) receive display screens that are

constructed (based on user inputs) at the central location and then transmitted to the remote locations.

Importantly, Boerger makes no mention of any ability to recover any "stored" images after the conference has completed, consistent with the interpretation that the "picture storages" 5 and 6 are, like the FiFo buffer 10, simply allocated areas in RAM which are lost when the power is removed. Because the system is limited to a maximum of 12 users, only enough memory is required to construct 12 raster/screens, which, assuming 640 x 480 dimensions in pixels, is less than 1 MB per screen, or a total of 12 MB; even by the standards of the day, this could not be considered to be "high-capacity storage".

With regard to Lobodzinski, it first should be noted that the specification recites only one, not two, high-capacity storage elements. While the Examiner has not cited the specific text which describes two high-capacity storage elements, Applicants believe the most relevant passage is:

> "A mass storage device 7 may be one or more of the various standard original equipment manufacturer's disk storage devices, such as magneto-optical recordable optical disks, digital audio tape, and Winchester disk drives." (col. 9, ln. 27-30)

However; although multiple types of storage devices are cited as capable of being integrated into the system in a variety of combinations, the mass storage device 7 always is treated as a single unit, and there is no disclosure of making more than one recording at a time; indeed, there is no obvious purpose to making a second recording, or how the signal recorded on one medium would differ from the signal recorded on another medium. A feature of this system is the recording of all frames of video, so no modification of the frame rate is permitted (except during playback of previous recordings, as part of the analysis of the tests); therefore, the signal stored is identical

to the signal displayed, under all circumstances while the test data is recorded. During playback of the testing video, additional video images (frames) are individually linked to specific frames of the testing video:

> "Referring to both FIG. 2 and FIG. 4, the selection of a record button 64 will begin the archiving of the digital video with underlying audio, physiological signals, and timing ECG marks to the mass storage device 7. The recording will continue until the selection of a stop button 68 or a stop issued by the control output interface 4 (FIG. 1)." (col. 11, ln. 59-64)

Evidently, if any frames of the testing video were removed, then there would need to be provisions for keeping linked "timing marks" consistent with the other sources of data and the testing video. [See Figure 7 for the explanation of how multiple separate data streams are synchronized for simultaneous display during Playback of the testing video.] No such provisions are disclosed in the specification of Lobodzinski, so there are no provisions therein for varying the temporal parameters (such as the frame rate) of the stored recording of the testing video; this means that the temporal parameters (as well as the spatial parameters) of the testing video stored on the high-capacity storage device must be the same as that displayed during the actual medical testing. This removes much of the motivation for combining the teachings of Boerger with those of Lobodzinski.

In addition, the RAM disclosed by Lobodzinski cannot be classified as "high-capacity storage for many of the same reasons that the RAM disclosed by Boerger cannot be classified as "high-capacity storage". Furthermore, Lobodzinski states "The computer 6, in a preferred embodiment, is a standard original equipment manufacturer's computer with the following: (1) at least 8 megabytes of random access memory (RAM) ..." (col. 9, ln. 13-16). Even by the standards of the day, this could not be considered to be "high-capacity storage".

The combination of the Boerger and Lobodzinski references does not teach or disclose varying the spatial and temporal parameters at which a particular image is stored in accordance with one of the externally derived commands, nor does it teach storage on more than one high-capacity storage device.. As there is no disclosure in the combination of references of varying the dimensions and the rate at which an image is stored, applicant's attorney respectfully requests withdrawal of the rejection. Similarly dependant claims 2-7, 18, 33, 38, 43, 47, 52-54, 62-65, 66, 67-71, 72, and 73-74 are also not obvious.

Rejection of Claim 3 under USC 103(a) as being unpatentable over Boerger (US 4,650,929) in view of Lobodzinski (US 5,619,995) and further in view of Toyoshima (US 5,229,850)

The Boerger and Lobodzinski references have been discussed above and are not repeated here. The examiner has added the Toyoshima reference for the teaching of digital compression of an image at the location of the camera. As stated above there is no teaching in the combination of Boerger and Lobodzinski of varying the dimensions and the rate at which a particular image is stored in accordance with one of the externally derived commands. The addition of the Toyoshima reference does not cure this deficiency in the prior art including the rate and size at which a particular image is stored in accordance with one of the externally derived commands. As there is no disclosure in the combination of references of varying the spatial and temporal parameters at which an image is stored, applicant's attorney respectfully requests withdrawal of the rejection.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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